September 15, 2010

National Health and Environmental Effects Research Laboratory Comments on the NIEHS Gulf Proposal

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NIEHS Gulf Proposal contains specific comments with the main ones summarized as follows: comments here.

The general impressions are that this is an ambitious and obviously important effort. They are to be commended for involving many agencies, acting quickly, and reaching out to the local community. However, given the likely low exposures it may be unlikely that any health effects are observed. Mortality and cancer will be difficult to tease out given the long time for these health effects to present. For specific cancers, the low frequency of occurrence will make them difficult to attribute them to any specific exposure.

Were more highly exposed occupational cohorts considered? Such as BP employees or contractors, or other highly potentially exposed people such as fisherman. Some of those involved with cleaning would be exposed as little as one day, compared to high level repeated exposures possible among other occupational groups.

We would have liked to see more detail on the exposure reconstruction. Will exposures be classified as "low", "high", etc. or will some type of quantitative measure be conducted.? This is likely to be estimated with considerable error.

Was there any consideration for population based case-control studies as a more efficient and way to identify the likelihood of exposure for specific health outcomes? These studies would target a specific type of outcome (specific cancer or birth outcomes for example) and work backwards by identifying cases, then reconstructing exposure.

They are proposing to examine interesting specific biomarkers where and some differences could be seen. we would have liked to have seen a table and detailed list of each biomarker with a justification and some background on the measurement approach.

Similarly a table showing the medical records to be accessed, and the source would have been informative.

It will be critical that the "exposed" and "unexposed" groups are similar and the same screening procedures are applied to each group. For example, the "active" follow up group may represent a healthier, more vigorous subgroup as they were capable of more intense cleaning activities. In addition many demographic and biological and other exposures can affect or confound these biomarkers. There is not detailed discussion of the types of information that will be collected and controlled for.

There is a lack of specific hypotheses to be tested which raises concerns regarding the interpretation of chance findings.

No information is presented on the extent to which those who assisted with cleanup were actually exposed, what type of PPE was used etc. Was training and medical screening uniform for all the volunteer organizations? It is unclear what the medical screening procedures were to assess suitability for participation in clean up.

Why are no birth outcomes are proposed since the stress and exposures could manifest in such outcomes as low birth weight. Other long-term outcomes could be scores on aptitude tests and intelligence tests. Scores on memory tests could be a shorter term effect.

The participation rates and retention rates may be overly optimistic

There is a potential for recall bias as those who have chronic conditions, or gotten sick after exposure for other reasons, but were well enough to meet medical clearance - may overestimate their exposure.

This seems to be more of a hypothesis generating study rather than a study designed to address specific health outcomes and endpoints. These studies often produce many associations, some of which are "significant" and some which are not and it can be a challenge to interpret the results.